

**In the United State Patent and Trademark Office**

Appn. Number: US 10/599,555 national phase entered on October 1<sup>st</sup>, 2006  
International Appn Nr. : WO 2005/109985 / PCT/EP2005/051404  
Applicants: Robert Desbrandes, Daniel L. Van Gent  
Tittle : METHOD AND DEVICE FOR MODIFYING THE  
DEEXCITATION PROBABILITY OF NUCLEAR ISOMERS  
Examiner: Mr. Brooke PURINTON

Givarlais, France, 2009 November 28<sup>th</sup>

<b>IDS and amendments</b>
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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir,

Please find an IDS for the Benett's patent which was cited in the course of examination by Mr. Johannes MONDT, Examiner, Art Unit 3663 of our patent application 10/599,868 which has the same priority date as this application.

After a careful review we believe that the document may describe inherently  $^{99m}\text{Nb}$  having the property of entangled metastable isomer nuclides, although neither the entanglement, nor the variable half life is described as such:

In the Benett's patent the target 22 contains initially  $^{100}\text{Mo}$  which is stable. Under irradiation by Bremsstrahlung at 10.6 MeV some  $^{99}\text{Nb}$  and  $^{99m}\text{Nb}$  are produced, and they decay in  $^{99}\text{Mo}$ , which decays in  $^{99}\text{Tc}$ . Thus for a shot time, target 22 contains  $^{99m}\text{Nb}$  probably inherently entangled locally within the single sample disclosed as

target 22 which is a solid in a metallic form. However,  $^{99m}\text{Nb}$  decays in 2.6 minutes while the product comprising  $^{93m}\text{Nb}$  in claim 2 decays in 16.13 years.

Because of this document which was submitted in the action dated October 16<sup>th</sup>, 2009, we would like to amend the claims and to introduce new claims aimed toward the limited number of species listed formerly as examples in claim 2.

Group I was listed as comprising claims [1-9], 12 and 19.

Claim 2 as amended would become the independent claim of product: the text of claim 1 has been incorporated in claim 2 limited to the species which were formerly listed as examples in the generic claim. This does not denote any abandonment of matter within the application. As further discussed in the remarks we believe that claims 13-17 are dependent claims of claim 12 and pertain to group I. A number of new dependent claims are added which are dependent either to claim 2 or to claim 12, which we believe make them pertain to group I.

Please find the following sections in this amendment:

**CLAIMS:** a revision mode claim listing begins on page 3 and a clean version begins on page 9.

**REMARKS:** remarks begins on page 15.

We apologize for this amendment, which we believe is required by the description of a species of the product of claim 1 inherently in the Benett's patent. We are prepared to consider any further concerns you may have on patentability of our claims in order to proceed to the right protection of the invention.

Respectfully yours.

Robert DESBRANDES  
Inventor.